



14th NACA Governing Council, Myanmar

NACA's 14th Governing Council Meeting was held in Yangon, 28 March – 1 April 2003 in conjunction with an Aquaculture Seminar and Workshop on Aquaculture Development.

Outcomes in brief

Welcome to the new Chair

The meeting was opened by the Minister of Livestock and Fisheries of Myanmar, Brigadier General Maung Maung Thein. U Hla Win, Deputy Director-General of the Myanmar Department of Fisheries was elected as the new Chair of the Governing Council. Mr Don Ariyawansa Kannangara, Chairman of the National Aquaculture Development Authority of Sri Lanka was elected as vice-chair. On behalf of the network, the Secretariat would like to thank the outgoing Chair, Mr Junaidi Che Ayub of Malaysia, for his guidance and assistance rendered during the year.

Welcome to NACA's first Associate Members

NACA would like to welcome the Secretariat of the Pacific Community (SPC) and the Asia-Pacific Association of Agricultural Research Institutes (APAARI) as NACA's first Associate Members. Both organizations had expressed a desire to join for some time but there was no mechanism for this under the existing NACA Agreement. In recognition of the close ties and mutual support already offered by all parties the Governing Council amended the Agreement to include a new provision for Associate Membership. Council has also agreed to accept a reciprocal invitation for NACA to gain Associate Membership of APAARI. The Secretariat looks forward to strengthening ties with both organizations.



Delegates to Governing Council 14

Highlights of 2002

The full Report of the Director-General to Governing Council 14 is available for download from www.enaca.org/WorkProgram.htm.

The **STREAM Initiative** became fully operational in 2002 with all of its themes implemented including Livelihoods; Strategies, Processes and Practices; Policy and Institutional Development; and Communications. Other achievements include:

- Establishment of Communications Hubs in Cambodia, Philippines and Vietnam;
- Implementation of a policy-oriented project in India;
- Preparations to establish hubs in Nepal, China, Laos, India;
- Involvement and training of Government and NGO personnel for work on livelihood-oriented activities
- Establishment of new partnerships with AusAid, APEC, and the Gramin Vikas Trust, an NGO in India.

The **Aquatic Animal Health Programme** held a training workshop on Import Risk Assessment: a new area for global partnership to strengthen capacities in fish health management for trade. Training workshops were carried out in Asia and Latin America with participation of several governments (including non-APEC members), institutions in developed and developing APEC economies, and centres in UK and France. Other highlights included:

- An emergency assistance to investigate a serious outbreak of a Koi carps and common carps syndrome in Indonesia, a national problem that impacts on livelihoods of poor farmers and threatens other countries in the region. This demonstrated the capacity of NACA to mobilize rapidly and in an extremely cost-effective manner. NACA brokered assistance from ACIAR and many other agencies, institutions, laboratories and the commercial sector.
- First Meeting of Regional Advisory Group on Aquatic Animal Health. The group developed a list of actions to

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NACA Alumni notes - U Minn Thame

NACA salutes U Minn Thame, Senior Aquaculturist, 1st Batch 1980-81, for a long, faithful and continuous service to aquaculture, government and country

U Minn Thame is briefing the NACA mission on Myanmar's shrimp aquaculture projects, in this December 3 2002 photo. He also served as technical guide and resource person for the coastal aquaculture group of the twelve-day Mission that was composed of senior officials from NACA, FAO, the Australian Institute of Marine Science (AIMS) and the Australian Centre for International Agricultural Research (ACIAR).

U Minn Thame was among 137 graduates of the NACA Senior Aquaculturist Program. He was in the first batch (along with FAO FIRI Chief Jia Jiansan). He has served Myanmar's fisheries in various

technical capacities. At present, he is in charge of the government's shrimp development program. One of the innovative steps he made was to organize a training program for technicians who are or would be employed by the industry, with support from the industry. It was a four-month course that had the trainees going back to review basic concepts and seeing them applied in field, lab and hatchery situations, and then focusing on real problems faced by shrimp farming. NACA contributed three resource speakers - a shrimp aquaculture expert, environment specialist and health specialist - to the training.

U Minn Thame is looking towards retirement after more than 30 years of continuous government service. He has set up a "modest but profitable and indeed environmentally friendly shrimp farm and



U Minn Thame

runs it with his sons" and plans to establish a hatchery for freshwater fish species to produce quality seed.

Australian Youth Ambassador Assisting in the Development of Recirculating Shrimp Farm Technologies

The Australian Youth Ambassadors for Development (AYAD) program gives young professional Australians an opportunity to live and work in the Asia-Pacific region. The AYAD program is funded by the Australian aid organisation, AUSAID, and youth ambassadors can undertake assignments in a range of development orientated fields. In the latest AYAD intake, Dirk Erler has taken up a position at the Thailand Department of Fisheries (DOF), National Institute for Coastal Aquaculture (NICA) in the Songkhla province of Thailand. Here he will be working with Dr Putth Songsangjinda on improving treatment technologies for recirculating shrimp farms. NACA, Queensland's Department of Primary Industries, and the DOF were jointly involved in developing the project, which was then submitted to AUSAID and DTEC for approval.

Dirk has recently completed his PhD in shrimp farm effluent management in Australia. In particular looking at the inclusion of secondary crops (mullet, banana and shrimp) as well as bacterial remediation techniques, in shrimp farm effluent treatment ponds. In Songkhla, Dirk, together with Dr Songsangjinda and his research team, will be evaluating in detail the influences of secondary crops (mainly scats and mullet) on settlement pond water and sediment quality. Additionally they intend to quantify the effects of the inclusion of artificial substrates (coconut fronds) on water quality and nutrient removal. This project is part of the DOF's ongoing commitment to the development of environmentally sustainable shrimp farming practices. During his 12-month stay in Thailand, Dirk will also be visiting shrimp farms in the Rayong, Chantaburri, Satun and Trang provinces to exchange information on

sustainable shrimp farming practices. For further information on either the project or the AYAD program please contact Dirk directly at DirkErler@hotmail.com.



Australian Youth Ambassador, Dirk Erler

Nepal to join STREAM Initiative

Following a request to become a member of the STREAM Initiative by the Director of Department of Fisheries Development (DOFD) to the Governing Council of NACA, negotiations have taken place over the last year to establish a STREAM National Office and Communications Hub in Kathmandu.

Three separate agencies under the Ministry of Agriculture and Co-operatives, take responsibility for fisheries development, research and extension/communications in Nepal. The central government agency responsible for fisheries development in Nepal is DOFD, its Programme Director is Dr Deep Swar, (the current Officer-in-charge is Dharmi Man Singh). The Nepal Agricultural Research Council, Fisheries Research Division is responsible for fisheries research; its Chief is Dr Ash Kumar Rai. The Agricultural Information and Communication Centre deals with communication and dissemination, its Chief is Shukra Pradan.

Following a second STREAM-NACA mission to Nepal in February 2003 four agreements have been reached:

- His Majesty's Government Nepal has formally agreed to become a part of the STREAM initiative and to provide from its own resources the National STREAM Co-ordinator;
- STREAM operation in Nepal will be a collaboration between many partners, the key founding partners in Nepal will be DOFD and AICC;
- The Communications Hub Management is a key STREAM function, in Nepal this function will be fulfilled by Mr Nilkanth Pokeral an Information Specialist within AICC where the physical facilities will be housed, in collaboration with a specialist from DOFD. The time allocation and mode of sharing of this function would be 70% of the Communication Officers time and a time to be agreed by DOFD for their input. Management of the Hub is the equivalent of a fulltime position;



Above: STREAM Director Graham Haylor being interviewed for television by the staff of the Agricultural Information and Communications Centre, Kathmandu. Below: AICC Chief, Dr S.K. Pradhan is second from right.



- To consider and agree a STREAM strategic plan which will be likely to include a STREAM communication version of the Trans-Himalayan Coldwater Fisheries Network. permit the scope of the network to be expanded to draw on the experience of other nations with highland fisheries and aquaculture interests, such as Pakistan and Vietnam.

Following expressions of interest from a number of member countries it has been proposed to expand the focus of the network to 'Highland Fisheries'. This will

NACA Joins Thai IT for Agriculture Forum

NACA became a founding member of Thailand's *IT for Agriculture Forum* at a signing ceremony on 31 January. The forum has been initiated by Thailand's National Electronics and Computer Technology Centre (NECTEC) in order to enhance linkages between organizations providing technology transfer and the provision of agricultural services. The development of a collaborative dissemination system will assist with technology exchange and transfer for sustainable development in the agricultural sector.

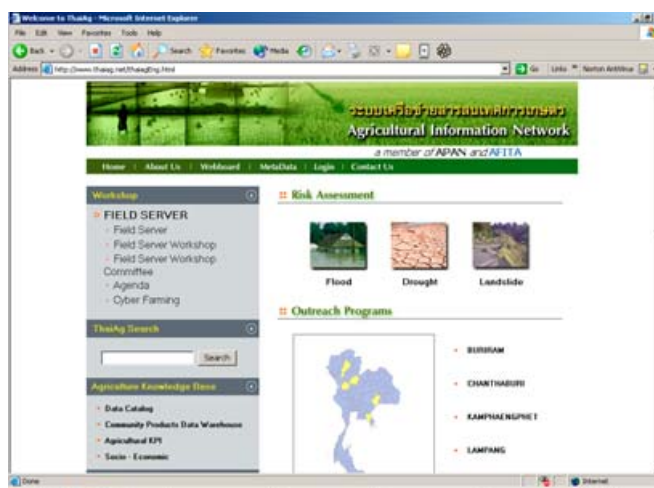
The objectives of the forum are:

- To exchange knowledge and experiences, scientific documentation and methodologies to develop sustainable and acceptable community-based risk management systems.
- To enhance national and regional capability with respect to productive information technology systems.
- To share knowledge and experiences from Thailand with Asian countries and regional institutes to reach resource-poor farmers faster and to reach more of them.
- To establish mutual links between the various organizations under the Ministry of Agriculture and members of IT for Agriculture Forum in information technology and agriculture risk assessment and
- To set up a delivery systems and agricultural technology transfer on non-commercial basis for productive and sustainable farming.

Speaking at the signing ceremony, Dr Thaweesak Koanantakool, Director of NECTEC, indicated that information and communication technologies (ICTs) are

becoming increasingly important tools in development.

“As ICT development progresses, the digital divide has become a growing concern. Thailand intends to develop herself to be a knowledge based society but it is a matter of fact that information poverty still exists throughout the rural community”, he said.



www.thaiag.net

“NECTEC, in collaboration with the Ministry of Agriculture, has launched the ‘Agriculture Information Network’ as a response to the unmet information requirements of the agricultural sector. Farmers should gain benefit from the contents provided which include improved risk assessment, agriculture warning systems and an agricultural knowledge base, which aim to improve the technology, productivity, income and stability of Thailand’s agricultural sector,” he said.

Other members of the forum are the Southeast Asian Fisheries Development Center (SEAFDEC), the International Water Management Institute (IWMI), the School of Advanced Technologies at the Asian Institute of Technology, and the Asia-Pacific Regional Technology Centre (APRTC). Members of the forum meet bi-

monthly to discuss joint projects and opportunities for collaboration. The forum itself is a member of the Asia-Pacific Advanced Network and the Asian Federation for Information Technology in Agriculture.

NECTEC has established a joint website for the forum that will assist with the dissemination of technical and practical

information to improve accessibility and to serve the needs of farmers across the country and the region. The website is the public interface of a large ‘data warehouse’ that will tie together information from many different providers. To a visitor it will seem as if they are accessing information from a single place. However, behind the scenes the data warehouse will actually be providing access to information from many different sources simultaneously.

“The data warehouse consists of common databases and geo-spatial databases from various departments and organizations in the country and abroad”, Dr Koanantakool said. “Farmers can get access to the contents through the Internet by themselves or from groups of professional people called Information Brokers. The government intends to provide the necessary infrastructure to every sub-district nationwide under Internet Village Project. This project will be fully launched by the end of year 2003 and will continue for two more executive years to complete capacity building for the Knowledge Society in rural communities.”

The forum’s website is accessible from www.thaiag.net and is available in both Thai and English.



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Training and study tours organised by NACA in first quarter 2003

Marine shrimp farming

The Secretariat organized a two-day study tour in Thailand, on 27-28 January 2003 on marine shrimp farming for technical team from the Godrej Agrivet Company, a leading shrimp feed manufacturer in Andhra Pradesh, India. The technical team consisted of Mr. Tapan Kumar Das (Team Leader), Mr. Manoranjan Kumar Patra, Mr. Solium Dayakar, Mr. Naram Prasad and Mr. Bonda Kasee. The main objective of the study tour was to procure some experiences from Thailand concerning use of shrimp feed, health management strategy and practices at farm level and implementation of code of conduct for responsible fisheries in shrimp industry in the country.



Godrej Agrivet team with Dr. Supis Thonglor of Aquaculture Feed Quality Control Division, and Dr. Pornlerd Chanratchakool of Aquatic Animal Health Research Institute, Department of Fisheries, Thailand

shrimp farmer association regarding the self-imposed regulations over the use of antibiotics and chemicals in shrimp farming.

Indigenous Australian aquaculture group visits Thailand

West Australia sent a study mission to Thailand from 23 – 28 March to learn about freshwater giant prawn aquaculture and other aquaculture in the country. With the assistance of the Thai DOF, the NACA Secretariat organized several meetings and field visits for the mission. The seven-member mission included Dr. Chan Lee (Team Leader), from the DOF Western Australia and six members of The Kimberley Aquaculture Aboriginal Cooperation (KAAC), namely Ms Jacynta Fong (Community Aquaculture Project Officer), Mr. Charla Clements (KAAC Stakeholder), Mr. Bill Aiken and Mr. Neville Poelina (Bunuba and Pandanus Park Aboriginal Corporations), Mr. Neil McGinty and Mr. Terry Wilson (Mud Spring Aboriginal Corporation).

The study mission members gained familiarity with the hatchery and grow-out technology of freshwater giant prawn, marine shrimp, seabass and also freshwater ornamental fish currently used

in Thailand. The information acquired from the study mission was transferred to the indigenous communities and other interested proponents in the Kimberley, West Australia, through workshops and briefs as follow-up activities of the mission.



The West Australia visitors were briefed by Mr. Wattana Leelapatra, Director of National Inland Fisheries Institute (NIFI) of Thailand, Ayuthaya Province



The Godrej Agrivet team with staff of NACA Secretariat and the "Shrimp Farming and the Environment" consortium

The delegation met with and held discussion with experts of Thai DOF working on shrimp feeds and shrimp health management, and the NACA Secretariat staff, including the technical staff of the "Shrimp Farming and the Environment" Consortium housed by NACA. Apart from the meetings in Bangkok, the team visited a few shrimp hatcheries and grow-out farms in provinces on the east coast of gulf of Thailand. In Rayong Province, the visitors had fruitful discussions with local



The West Australia visitors in Chonburi Province with a local prawn farmer



*Visit to a seabass hatchery (*Lates calcarifer*) on the eastern seaboard*



With Mr. Plamoat, the seabass hatchery owner

Bangladesh Fisheries Training and Extension Project tour

Sponsored by the DFID of UK, the NACA Secretariat organized a study tour to Thailand and southern China on aquaculture development and fisheries extension for a group of twenty fisheries personnel from Bangladesh, 9-24 March. The study tour was part of the overseas training activities of the second phase of the Fisheries Training and Extension Project of the Bangladesh DOF which terminates in June. The study tour team consisted of mostly fisheries extension officers from the field and was headed by the Project Director, Mrs. Ferdous Parveen.

In Thailand, the team visited both government and non-government extension organizations / projects in the central region. Also visited were small-scale freshwater hatcheries and fish farms.

In China, the team visited fisheries authorities, government extension and farmer training centres, fisheries regulation stations and stock farms in Guangdong and Yunnan provinces in southern China.



Bangladeshi study tour team in Thailand



Briefing by the sub-district agricultural technology transfer centre staff



Briefing by the Guangdong Provincial Fisheries Bureau and Provincial Fisheries Extension Centre officials



Visit to a fish hatchery in Guangdong, China



Visit commercial cage culture in Pearl River, Guangdong



Group picture in Guangdong, China



Visit fish farm in Yunnan



Ugandan trainees being briefed by NIFI Director, Mr. Wattana Leelapatra, and Mr. Sujin Nookwan, a senior freshwater fisheries biologist

Ugandan farmers train on catfish breeding and culture

A hands-on training course on catfish breeding and culture was organized with the National Inland Fisheries Institute (NIFI) of Thailand for five fish farmers and officers from Uganda during 24 March – 6 April. The course was requested and funded by the Representative Office of FAO in Uganda. The trainees were three fish farmers and hatchery operators, Mr. George Namitego, Mr. Muttalib Musoomerwa Buyinza, and Mr. Elijah Elisaphan M. Kotaki, and two officers, Mr. Olok Owani Simon and Dr. Wilson Waiswa Mwanja. The training covered induced breeding and hybridization of *Clarias* spp catfish, catfish hatchery operation, nursing and grow-out techniques of catfish. Special lectures and field trips were also arranged for the Ugandan team to learn freshwater aquaculture of other species practiced in Thailand.

...continued from page 1.

address emerging issues. These include a survey to identify suitable centers to form a regional network of resource centers for aquatic animal health; an update of the Asia Diagnostic Guide for Aquatic Animal Diseases; and priorities for capacity building.

A business plan has been drafted for the **Aquaculture Education Consortium** and consultations have been initiated with some partners.

2002 marked the first year in which the **Asia-Pacific Marine Finfish Aquaculture Network** was operating within the regular programme of NACA. Highlights included:

- Participation and scope expanded and the program now sustained internally
- Research, extension and information carried out - and being sustained - with primary collaborative assistance from ACIAR and national and regional institutions.
- A training program on grouper breeding and hatchery was carried out in Indonesia (with assistance of ACIAR, JICA, NACA, Gondol)
- Plans to repeat the course and conduct a study program in Hong Kong, China and Southern China.

Highlights of the **Consortium on Shrimp Aquaculture and the Environment** included:

- Thematic studies and most of the case studies completed and published
- Work has moved on and multisectoral consultations have been initiated to use the results to develop codes of practices, management guidelines and extension messages on good better farming practices;
- Sharing of experiences on better management practices based on the Consortium work;
- A set of management principles has been drafted from the Consortium work - that would form and a series of consultations on these are planned;
- Proposal for an International Agreement on a Code of Conduct for Responsible Shrimp Aquaculture - the basis of a set of harmonized principles for shrimp farm management under the next phase of consortium work;

- Consortium to become sustainable and self-financing;
- A Phase 2 has been discussed among partners (NACA/FAO/WB/WWF) and funding is being sought to initiate activities, including work on shrimp aquaculture certification.

A collaborative program on **Shrimp Health Management in India** has been established among NACA/MPEDA and ICAR in India (with assistance also from ACIAR) on disease control in shrimp aquaculture.

- Work is integrated into a farm - and sector management program - addressed at sustaining the resource base and the livelihoods of the many small farmers in the coastal areas;
- Lessons have been produced in institutional cooperation, in working with farmer groups and hatchery operators as well as messages for training and extension;
- The management recommendations are providing a basis for reducing risks of shrimp disease on farms in Andhra Pradesh.

Inland Aquaculture R & D activities have focused on sustainability of the physical and biological resource base, small-scale systems, culture-based systems, poverty and food security. 2002 highlights included:

- Land, water and genetic resources – NACA took part in CGIAR and FAO workshops to develop activities and advise governments on land and water monitoring and management for aquaculture;
- Low cost aquafeed - NACA, ACIAR and DOF Cambodia organized a Workshop on Feeds and Feeding Constraints in Inland Aquaculture: Research and Extension Priorities. Workshop focused on the Mekong basin, complementing the freshwater aquaculture workshop held at CIFA;
- Culture based fisheries - development of integrated management systems in Indonesian reservoirs for integrating fisheries and cage culture into reservoir management, under ACIAR's auspices. This is scheduled to start in April during 2003.

Highlights of the **eNACA Information Programme** included:



Published by the
Network of Aquaculture
Centres in Asia-Pacific,
Bangkok, Thailand

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15 member governments in the
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charge to governments, libraries,
development agencies and
other interested parties
on request.

- Improvements to website design and development of a communications infrastructure to support electronic networking and online collaboration
- Development of digital publishing capacity within the Secretariat;
- Development of new media such as an email newsletter and quarterly publications CD, significantly improving awareness of and accessibility of NACA information products in print and electronic form as well as reducing publication and distribution costs;
- Development of an integrated media strategy has increased website visits by 420% and distribution of electronic copies of documents is beginning to exceed distribution of hard copies.

Training continues to be a strong suit:

- The Integrated Fish Farming course in Wuxi is now on its 22nd uninterrupted yearly offering;
- CIFT in Cochin India and Indonesia's GRIM are the latest associated institutions to offer regional courses;
- Eight training courses run in 2002 with 77 participants along with another eight study tours with 54 participants.

The next two years

Strategies for implementing the workplan for the next two years will be developed at the upcoming Technical Advisory Committee Meeting in Bali, 15-18 July. The outcomes will be covered in the next issue.